Summary of Changes
ENERGY STAR® for Residential Ventilating Fans
Draft 1 Version 2.0 Specification

In this document, EPA highlights the major changes made to the existing Version 1.0 specification for ENERGY STAR qualified Residential Ventilating Fans. This document is intended as a road map to assist stakeholders in reviewing the Draft 1 Version 2.0 specification. Changes to each Section of the specification are provided below.

1) **Definitions**:

Definitions for the following terms were added: *Combination Unit, HVI 915, HVI 916, HVI 920, Inch of Water Gauge, Light Source, and Sone*.

The following definitions have been amended:

A. Residential Ventilating Fan:

Residential Ventilating Fan has been redefined, and excluded product types have been grouped to indicate those that may be included in future versions of the specification. Residential ventilating fans with electric resistance heating elements, fans with heat lamps, and fans with lamp sockets that accept incandescent lamps, while previously included in Version 1.0, have been excluded in the Draft 1 Version 2.0 specification.

H. Power Consumption:

References to the HVI Directory have been removed from the definition, but are included under Product Testing (Section 4).

2) **Qualifying Products**:

This section has been shortened to act as a summary of the types of products eligible for ENERGY STAR qualification. Actual specifications for the qualifying products have been moved to "ENERGY STAR Program Requirements for Qualifying Products" (Section 3), as appropriate.

3) **ENERGY STAR Specification Requirements for Qualifying Products**:

Table 1 has been renamed as "Draft 1 Criteria for ENERGY STAR Qualified Residential Ventilating Fans – Minimum Efficacy Levels."

The following changes have been made in Table 1:

- Sound level requirements, previously included in this table, have been moved to a new Table 3 in the Quality Assurance Requirements section (Section 3.B.2).
- A statement has been added indicating that the minimum efficacy levels provided in Table 1 are to be measured at 0.1 in. water gauge (w.g.) static pressure test conditions (see Sections 3.B.3 and 4.D).

A. **Lighting Requirements**

A new Table 2 titled "Light Source Criteria" has been added.

This table provides the performance requirements that must be met by ventilating fans with light sources. If the products already meet the requirements provided in Table 2, manufacturers will not be

required to submit the light source for separate testing. **Note: Light sources with lamp sockets for general lighting that accept incandescent lamps are now excluded.** Qualifying light sources must meet requirements for system efficacy, lamp start time, lamp life, color rendering, correlated color temperature, and noise. These requirements are based on the current ENERGY STAR specification for residential light fixtures.

Maximum wattages for general lighting and night-lights have been added and appear in Table 2, as well.

B. **Quality Assurance Requirements**

This section, which was previously titled "Warranty", has been restructured and now includes the following three new sub-sections:

1. Early Product Failure

Currently, the warranty requirements (Version 1.0) are 2 years (Tier I) and 3 years (Tier II). To address the issue of early product failure, a one-year comprehensive warranty is now required in Version 2.0. **Note:** Further research is needed to determine what requirements should be included in a comprehensive warranty.

2. Fan Sound Levels

Sound level requirements, previously included in Table 1, are now included in a new Table 3 titled "Draft 1 Criteria for ENERGY STAR Qualified Residential Ventilating Fans – Maximum Allowable Sound Levels".

The "maximum allowable sound level" for bathroom and utility room fans (1 to 75 cfm) has been lowered from 2.0 to 1.5 sones. The "maximum allowable sound level" for bathroom and utility room fans (76 cfm or over) has been increased from 1.5 to 3.0 sones.

The sound level requirement for range hoods (up to 500 cfm) has not been changed.

3. Installed Fan Performance

The Draft 1 Version 2.0 specification requires all qualifying ventilating fan models, when measured by industry standard testing procedures at 0.25 in. w.g. static pressure, to deliver a rated airflow (cfm) of at least 75% of the rated airflow delivered at 0.1 in. w.g. static pressure for that particular model.

Under the current (Version 1.0) specification, partners are only required to report airflow (cfm) at 0.1 in. w.g. EPA included this requirement to ensure similar performance (efficacy) of a ventilating fan in the home as well as in the test laboratory.

C. **Inclusion of Installation Instructions**

Under Draft 1 Version 2.0, manufacturers must now provide picture diagram-type installation instructions with qualifying products.

4) **Product Testing**:

This section has been reorganized to provide a more logical way to describe the test procedure to partners. Further information is provided about testing products to the HVI Standard 915, 916, and 920, as applicable.

Static pressure measurement requirements (Sections 4.D.1 and 4.D.2.) have been added to assure

that all units being tested are done so using the same static pressure difference, since industry members are permitted to report rated airflows at different static pressures.

Under the Draft 1 Version 2.0 specification, partners will be required to report cfm data for models tested at both 0.1 in. w.g. (previously required under Version 1.0) and 0.25 in. w.g. static pressures.

5) **Effective Date**:

EPA has not yet determined the Draft 1 Version 2.0 specification effective date. In this section, stakeholders are encouraged to provide comments on a potential effective date. Based on preliminary industry research, EPA proposes this date to be 6-9 months following finalization of the Version 2.0 specification.

A. **Qualifying and Labeling Products under the Version 2.0 Specification**

This section was added to explain that all products with a date of manufacture (TBD) must meet Version 2.0 requirements in order to use the ENERGY STAR on the product or in product literature. The date of manufacture is specific to each unit, and is the date on which a unit is considered to be completely assembled.

B. **Elimination of Automatic Grandfathering**

This section has been added to stress that ENERGY STAR qualification is not automatically granted for the life of the product model.